

I finally came down to the fact that I'd always been taught that what you ought to do is command in combat. So, here I'd been selected for battalion command in combat and what am I turning down? If I tell the Chief of Staff I'd rather do that than be a province senior adviser, with all my training—I mean, what's negative about that? Being province senior adviser was awfully important, but so was commanding in combat.

So, I came down to a decision that what I really wanted to do, had always wanted to do, was go command a battalion in combat. I'd already been an adviser. That was okay too. What did I really want to do? So, I wrote a letter to the Chief of Staff of the Army, General Johnson, that I couldn't accept the nomination because I really wanted to go command in combat. I got a nice letter back from the Adjutant General of the United States saying the Chief of Staff understood. So, I went off to Vietnam.

I left Leavenworth a week early so I could go take command because it was becoming available early. Took my family to Green Cove Springs, Florida, south of Jacksonville. A waiting-wives community had been forming in an old Air Force installation there. I missed the graduation ceremony where I would have had the opportunity to be in the picture with such stalwart folks as Gerry Galloway, Colin Powell, and Don Whalen, who were there also at that time. My experience I mentioned while with the 82d had managed somehow to get me past all the exams so that I finished in the top five of the class with those other illustrious folks. So, in the graduation picture of the class of 1968 were four people, and I was on the way to Vietnam.

Q: That's a good story.

### **Commander, 577th Engineer Battalion (Construction)**

Q: In July 1968, I believe it was, you became battalion commander of the 577th Engineer Battalion (Construction) your second tour in Vietnam. Were you familiar with that unit before you went over? Did you have any input into that command assignment?

A: No. As I mentioned, Major Ernie Edgar told me that I was going to command and told me that was the battalion I was slated for. He also advised that many times when people came into the country their assignments were changed, but that I was certainly going over on the command recommended list.

So, I moved my family to Green Cove Springs, Florida, and then reported back into the system. I flew out to Travis Air Force Base, then on to Vietnam and into the replacement depot at Long Binh upon arrival.

I spent a couple of days there, and then I was told I was going to the 20th Engineer Brigade. I tried to intercede and say, "No, I am supposed to go to the 18th Engineer Brigade and battalion command." They said, "No, the 20th it is."

The 20th sent over a jeep, and I jumped in and we were on our way to the headquarters, where I met with a Colonel [James A.] Vivian, who was the deputy commander of the 20th Engineer Brigade.

He said, “Wow, this is wonderful. We have an unprogrammed major.” I said, “Well, Sir, I’m unprogrammed to you because I’m programmed to the 18th Engineer Brigade, your cousins up north. So, I’d really like to go up there and take that battalion command.”

He said, “Don’t worry about that. We’ve got lots of battalions down here. You haven’t been promoted yet”—which was true. I was a promotable major at the time, and they had delayed promotions that year beyond the end of the fiscal year to save a few bucks.

So, he said, “We’re going to assign you to the 159th Engineer Group. If you really hurry up you can make their change of command ceremony because Colonel Bates Burnell is going to take over that group this afternoon in about an hour and a half. So, you ought to hustle on over there.”

They put me in a jeep, took me to the 159th Group, and I was taken right in to Colonel Burnell and his predecessor—I don’t remember his name. Colonel Burnell said, “Glad you’re here. You’re my new S-3.” So, I went out and watched the ceremony, and then started figuring out how I became the S-3 very quickly and the old S-3 packed his bags and headed for one of the battalions.

This was the 3d of July in 1968. I spent the next day, the 4th of July, getting organized, getting uniforms and gear and sewing patches on and doing all of those things required on moving in. I went to the S-3 shop to get started because the next day, the 5th, we were to start Colonel Burnell’s—and now my—orientation. We were to visit two battalions.

We flew the next morning, the 5th, down to the Y Bridge in Cholon, which was a place that had a lot of action in the Tet attacks—we’re talking 1968, of course. Tet had occurred about four months prior. There was a lot of rehab work being done around the Y bridge, and one of the battalions was doing that work—the 92d.

After that, we flew over to another battalion at Long Thanh North, and I think that was the 46th. The chopper landed, and then we were taken from the air strip over to battalion headquarters. As we pulled up, the battalion commander came out and said to Colonel Burnell, “Sir, you’re wanted on the phone right away. It’s Colonel Vivian from brigade.”

Now I, of course, had told Colonel Burnell the story when I first came in that I really wanted to go to the 18th Brigade and be a battalion commander. After taking the phone call, he came back and said, “Well, Sam, you were right. You are going to the 18th Engineer Brigade and take a battalion. In fact, General [Harry M.] Roper is so unhappy that the 20th Brigade has tried to squirrel you away that he’s flying in here personally in one hour and a half to seize control of you and take you back. So, you’ve got an hour and a half to get all of your gear and be back to Long Thanh North when he flies in here.”

So, I jumped in a jeep and drove to Long Binh. I got the headquarters to get me a supply sergeant, and I pushed to him all the gear I'd been issued and said, "It's all there because I haven't done anything with it."

I went to the laundry and got my clothes out, wet. Got my uniforms back from the tailor shop where they were sewing 20th Brigade patches on it. The only thing that saved me was that I brought a parachute kit bag with me. So, I just opened it and crammed everything in it and jumped back in the jeep and drove back to the airstrip. Then General Roper landed and said, "I've got you. Where have you been?" Well, he didn't really want to hear the story. He just knew I was in his possession.

He turned me over to Colonel [Douglas K.] Blue, his deputy brigade commander, and we flew north to Pleiku, thence to Tuy Hoa. I was dropped off at the headquarters of the 577th Engineer Battalion at Tuy Hoa. Lieutenant Colonel Bob McDonald was the commander. He'd been trying to get home, and they'd kept him there until his replacement arrived. He had his goodbye thing with the battalion officers that night, and the next day we had the change of command, with General Roper flying in to preside along with the 35th Engineer Group commander, Colonel Del Fowler. Then they flew off with Bob McDonald, and I was the 577th Engineer Battalion commander.



*Lieutenant Colonel Kem commanded the 577th Engineer Battalion from July 1968 to July 1969.*

So, it was an interesting start. I really had nothing to do with the assignment, to go back to your question, to the 577th, other than the fact that, once I'd been designated, I kept trying to make sure I got there. I was also back in an area that I had served in previously—back in Tuy Hoa and Phu Yen Province.

The battalion was located in several Southeast Asia huts that had been built in the Army Phu Hiep compound next to the Army airfield. It was the logistics subbase of Qui Nhon, and the commander was the lieutenant colonel who reported to Qui Nhon in the logistical chain. The air base had a separate commander, also a lieutenant colonel. There was a large field hospital there that had a colonel commander. Periodically one battalion of the 173d Airborne would come in. Phu Yen was the 173d's area of operations, but they weren't always there. The lieutenant colonel was the senior person there in the operational chain.

So, the next morning I walked into my office, and I looked around and I didn't see any activity. There was one specialist sitting out there. Major Bob Tener had been the battalion executive officer. He left that morning, early.

So, Bob McDonald, the battalion commander, had left; Tener, the executive officer, had left. I was told my new executive officer wouldn't be in for another couple of weeks.

I'd seen a major out there as the commander of troops during the ceremony. He was the new S-3. The command sergeant major had left the week before. The S-1 was on leave in Honolulu, so there wasn't anybody around.

I told the specialist sitting out in front, the legal clerk in the S-1 section, to go find me that major. So, Major Pat Cummings came in and introduced himself. He'd been there about four days. He really didn't know much.

Bob McDonald and I had had about 45 minutes to an hour of talking about what the battalion was doing. He gave me some warnings, such as don't let yourself get trapped into paving that airfield; the matting is good enough. He warned that, "They're going to try to have you clear Vung Ro Bay of all jungle brush. Don't let them get you trapped into that. That's not engineer work."

He also evaluated the company commanders, all of whom were very junior. I think I had one first lieutenant and the other five were second lieutenants. Remember, you made first lieutenant in one year at that time, so this was, rankwise, a very junior battalion with little experience. So, I found myself right in the middle of that big summer rotational hump that we always read so much about.

Anyway, Pat Cummings did know that there was a meeting that afternoon at the sector headquarters—sector being the U.S. counterpart of the Vietnamese province headquarters. I said, "Great. Let's go."

He said, "Okay, but I don't know where it is." So, I said, "Well, let's go find the driver. He'll know where it is."

So, we got Bob McDonald's driver, and he had just changed three days before, and he didn't know where it was. So, we had nobody around who knew any of these things because they'd all rotated.

I knew where the headquarters had been during my last tour when I was there on the beach at Tuy Hoa in my first tour, that I have described already, '62 to '63. So, I said, "Let's jump in the jeep. We'll go back there and see if it's not the same provincial headquarters." Sure enough, it was. So, from day one we started going on dead reckoning. So, that's how I got started in the 577th.

Q: The 577th itself had been there a while, though; the unit had.

A: Yes, it had. I can't tell you how long, but I'd say about three years, and had been involved in the Cam Ranh Bay area and then Phu Yen for over a year. Maybe I should just go ahead and talk about the missions in the Phu Yen area of operations.

Q: Yes.

A: Basically, the 577th's area of operations extended from south of Vung Ro Bay to where it intersected with the area of the 84th Engineer Battalion in Nha Trang, to the north about halfway to Qui Nhon, where we intersected, or matched up with, the 84th Engineer Battalion stationed at Qui Nhon. Then we extended west, out past Cung Son, up that same road that I had helped open years before in Phu Bon Province.

Our basic mission was to provide combat engineer support to operational units in the area, which included the 4th Battalion of the 173d Airborne, as I mentioned. The 28th ROK [Republic of Korea] Division had a regiment there. The 47th ARVN had a regiment. The 47th was the same regiment that had been there years before when I had been an adviser.

Second, we were to maintain and clear the roads in our particular area of operation, which were primarily Route 1 from our southern boundary south of Vung Ro all the way up to the north about halfway to Qui Nhon, and then Route 7B, heading out west to Cung Son, and then on towards Cheo Reo.

Third, we were to build and upgrade QL-1 to a MACV standard from Vung Ro Bay to Tuy Hoa as a first priority, and that construction was under way.

Fourth, we were to support operations out of Vung Ro Bay, which was by now a thriving port that had been constructed and was a growing concern, run by the 1st Logistics Command.

Fifth, we were to support logistical operations around Phu Hiep Army compound. That involved building a POL [petroleum, oils and lubricants] tank farm, building a bunker for an ammunition depot, and other projects like that. Along with that were operations in support of Phu Hiep Army Airfield, where most of the construction had been finished. The runway was matted, and hangars were constructed. There was a chapel that we were working on. Also, the roofs had blown off two hangars in high winds, and we were reroofing them.

As part of the QL-1 upgrade, a very major project was constructing an 840-foot bridge over the Ban Thach River. Design and planning were under way, and the first piles had just been driven in the week or so before I arrived. So, that project was just getting started.

So, that was the 577th's mission there. Things from the past—Lieutenant Colonel Tom Lane had been killed in a recon of that part of QL-1 south of the bridge toward Vung Ro Bay earlier. I think he was the commander of the 39th Engineer Battalion at the time. He was flying along in a helicopter and took a round in the chest from the hillside when they were making their low-level recon.

Phu Hiep was a well-developed compound. We had built Southeast Asia huts for almost everyone. We had built a very large hospital there, which had quite a number of facilities and heliports where they could medevac folks into, and all the barracks where all the doctors, corpsmen, and nurses lived.

Tuy Hoa Air Force Base was about three kilometers away and located at the site of the former air strip that I mentioned earlier in the anecdote about when General Harkins and Chief of Naval Operations [George W., Jr.] Anderson had landed and buried their Caribou's nose wheel into the sand. On my earlier tour there was nothing there but the runway. Nobody secured it. Nobody occupied it. Now it was a full-fledged Air Force base with wire around it, operational facilities, officers club, pilots in white scarves there on Saturday night at the bar. A going concern in every way.

That was the layout of things at Tuy Hoa. It was a relatively mature buildup of the logistical base and Air Force base.

Q: That's a pretty big mission for a battalion, the things you were talking about there. It's a long list of responsibilities.

A: Well, it was. It was a big battalion. We had attached to it a float bridge company because while we were building the Ban Thach bridge we were also operating and maintaining an M4T6 float bridge over the Ban Thach River that had been in there a couple of years. So, the 553d Float Bridge Company (M4T6) was attached to the 577th.

We had attached an engineer light equipment company. We also had attached a concrete detachment and an asphalt platoon with its own Barber Green asphalt plant because we were to asphalt pave the highway we were constructing. That operation had started as well. So, we had about 30 kilometers of national highway QL-1 to build. We had a major quarry operation up at Chop Chai Mountain, north of the big Tuy Hoa bridge.



*Army Engineer bridges over the Ban Thach River in South Vietnam. In the foreground was an M4T6 bridge and the background an 840-foot, 13-pier bridge.*

The terrain that we lived on, though, the Air Force base and the Phu Hiep Army installation and airfield, were south of the Song Ba River. Where the river opened to the sea was wide. Route QL-1 passed over the river on a huge rail bridge that was decked. There was one-way vehicle traffic over this very long, very big rail bridge. So, we really had a constraint and bottleneck when we went north into the town. Tuy Hoa was just north of this river. We were building the other bridge, the Ban Thach, at another outlet to the south. Thus, anytime we went north we had to plan on the one-way traffic at the Song Ba bridge.

As I mentioned, our first priority was to upgrade the road from QL-1 from Vung Ro north to Tuy Hoa. Once we finished that, we were then to move north of the town and work on upgrading that road on the way to Qui Nhon. That road was in much better shape. The road from Vung Ro Bay was the main supply route to Phu Hiep Army installation and Tuy Hoa Air Force Base.

So, we did have a big battalion. We had a big area of operations and a lot of activities ongoing. We were later given yet another light equipment company, a dump truck company, and then a pipeline platoon, the latter because we also built a pipeline along the road from Vung Ro to Tuy Hoa.

We upgraded our crushers at the Chop Chai quarry operation from 75 tons per hour to 225 tons per hour. We got the extra trucks to haul so we could try to finish up the paving of that 30 kilometers of road and get out of there. Essentially, we did that while I was there over about the next eight to nine months. When I arrived, I suppose we'd probably paved about a kilometer and a half of the 30.



*The 577th Engineer Battalion quarry operations at Chop Chai Mountain near Tuy Hoa, South Vietnam, in January 1969.*

QL-1 was a very interesting project because it was so different in places. We had all kinds of construction. Down near Vung Ro Bay the road rose up from the deep port through rather high hills with steep grades. Then we had cuts down through the hills coming back down to the flatlands, the rice paddies along the coastline. So, we had six to seven kilometers of steep grades of side hill cuts and switchbacks to deal with.

Then we had 15 kilometers of rice paddy, where the highway was basically a ribbon of road with rice paddies on either side. Anytime you wanted to construct something, you really had to muck out a bunch of stuff and then get stabilized material into it.

The final eight kilometers were through sand, beach sands up near the Tuy Hoa Air Force Base and Phu Hiep. There construction was a matter of sand confinement and building upon it. So, we really had quite different kinds of construction facing us.

You left the paddy area and went to sand at about the Ban Thach bridge. So, we had three major different kinds of construction, and we'd go at them different ways. We had this huge Ban Thach bridge, which took a considerable amount of activity and effort.

I had assigned one company responsibilities for Vung Ro Bay and the area south of Ban Thach bridge. One company spent its time building the Ban Thach bridge, and one company worked north and at Phu Hiep. The equipment support folks were running the quarry operation, along with my equipment company. The asphalt platoon was out doing the paving operations and manufacturing the asphalt, which we did in our own Barber Green plant, which was located at the Phu Hiep compound. That was all under headquarters company.

The concrete detachment worked to place the concrete and form the precast concrete slabs that were used for the deck of the bridge. It was assigned to the line company that was building the bridge.

The other operations, the pipeline, the POL tank farm, and such, all were being done by various parts of the companies, and always at a lesser priority. Daily, we would have an operations meeting headed by the S-3—often I would participate—where we would try to shift equipment around on a priority basis to make sure we maintained production schedules.

Very definitely we kept things so that we continued to pave QL-1 and we continued to push bridge construction. If we needed a dozer because one was down, the one that was shaping the berms in the ammunition point might not make it to the project that next day because it would be diverted. We continually had to make operational kinds of decisions like that on the allocation of equipment.

Q: So, it was a big construction management job.

A: Yes, it really was. We finished the chapel at Phu Hiep Army Air Base and put the roofs back on the hangars. We did get the mission to clear and grub all the jungle around Vung Ro Bay that Bob McDonald had said stay away from. We had our hands full on a whole bunch of different kinds of things.

Q: Maybe we can talk a little bit more about the Ban Thach bridge project. That seems like a pretty sophisticated project for an engineer construction battalion.

A: It was a very sophisticated project. We had—my recollection—13 spans with five 50-foot, 36-inch-wide flange steel stringers. We were precasting the concrete deck, hauling the slabs to the site, and then welding them—we had weld plates cast into the slab—onto the stringers. Something like that hadn't been done over there before. A big construction menu in operation. It involved a lot of different things, a lot of priorities.

The pile bents were seven piles to a bent. There were three driven vertically on the center line and four on the corners, each driven to a double batter, which is more complicated. They were 18-inch steel piles filled with concrete. I think the deepest we drove was to 134 feet. So, yes, it was a rather sophisticated project.

We had a Vietnamese village on one side of the bridge. We continued to have to worry about security because it was out in the countryside. We had a couple of Quad-50 “dusters” at either end of the bridge that would cover up and down the river.

During low water we could approach the piers on sand bars, and we actually built in the dry. We would build out with sand and then drive piles through the sand, then excavate it and work the other end so we always were driving piles in the dry.

It was really quite an operation. All the while downstream we had the M4T6 bridge and constant monitoring of one-way traffic, all the low-beds or stake and platform logistic vehicles working their way up to the Army airfield and the Air Force base from Vung Ro Bay and returning.

So, it really was a complex, sophisticated thing. We had to maintain our concrete pours back in the Army compound. We set up a batch plant and a concrete batching operation and a precast yard. We had to set up routines to change the forms, place rebar, and pour the new panels. Then we moved them over to the side to cure, and all well in advance of when we’d need them. They were moved out to the bridge site sitting on rubber tires on low-beds. We had to be particularly careful picking them up and placing them before we welded them down. Then we checked the welds to make sure they were welded correctly. It really was a very good project.

Q: Was the company assigned to that still under a lieutenant?

A: Well, the company commanders changed from time to time. We got some captains in because you made captain in two years. Later on Captain Sam Champi was commander of C Company and finished the bridge.

Q: Again, that’s quite a bit of responsibility for a young officer.



*The 577th Engineer Battalion (Construction) built the Ban Thach River bridge from pre-cast elements in 1968.*

A: Yes, it was. Well, we maintained also rather tight battalion control. That was the priority project. Production priority was there because that was the one that, if you lost time, you couldn't make it up. At different parts of the highway and projects like the POL tank farm and the ammunition depot there were things you could do when you couldn't do other things because equipment had been diverted.

Out on the bridge, if you lost a day driving piles, then that was a day you weren't going to be able to pour the pile cap, or start putting stringers down, or eventually place the concrete deck panels.

We would have all those operations going at once. We'd be driving batter piles and we'd be forming for the pile cap on others that had been driven. We'd be placing stringers, and we would be bringing out deck panels, and then later on we'd be putting on railings and finishing the deck.

So, there was always something going on on that bridge. We were building it from both ends, all the time, and so we never wanted to let it slip behind schedule.

Q: Were you under a pretty tight schedule to complete it?

A: Well, not initially. Like anything, you made a projection of when you were going to complete, and you wanted to make that projection. Our jobs were so comprehensive and the responsibilities changed so often that basically we weren't fixed with any hard and fast date that it had to be done. That changed when Colonel Bill Barnes replaced Colonel Del Fowler as the 35th Engineer Group commander about halfway through my tour. I was there six months under each, basically.

Just before that was happening, Brigadier General John Elder, the brigade commander, had been thinking about how to change operations over time. The work was changing, and in response he was relooking the responsibilities of his three groups: the 45th Group in the north, the 937th located in the center, and the 35th in the south.

For instance, the 937th was in the center, but it really was operating along the highlands in the interior. It was centered out of Pleiku and went down to Ban Me Thuot. The 35th had been located in Qui Nhon and had the coastal area along the coastline of the South China Sea.

The change that John Elder was considering and working with his three group commanders was to make an east-west horizontal slice in the area of operations so the 45th would continue in the north; the 937th would take the center, both coast and inland, along Route 19 from Qui Nhon to Pleiku; and the 35th would move south to Cam Ranh Bay and take the things it already had at Cam Ranh Bay and the 577th in Phu Yen, but give up the 84th Engineer Battalion at Qui Nhon, which would go to the 937th. Then the 35th would take responsibility for the 70th Engineer Battalion, which was moving down to Ban Me Thuot. Then the 35th would go along the east-west highway from Nha Trang to Ban Me Thuot. The brigade's new plan really oriented along the main supply routes.



*Reviewing stand of Headquarters, 577th Engineer Battalion (Construction), at Phu Hiep, South Vietnam, in September 1968. From left to right, Major General David S. Parker, U.S. Army Vietnam Engineer; Major (P) Kem, Commander of the 577th; Brigadier General John Elder, Commanding General, 18th Engineer Brigade; and Colonel Delbert M. Fowler, Commander, 35th Engineer Group.*

The idea was to put greater emphasis down in the south, so there was going to be a shift of responsibilities southward, the idea being that the major traffic came up through QL-21 from the Saigon area, up to Dalat, cut down to Phan Rang, and then cut north on QL-1.

Major logistics traffic didn't follow the coast all the way up. By doing this, you avoided the Vietcong strongholds near Phan Thiet and south of Phan Rang.

There was to be a change of emphasis. We would finish up the QL-1 project we had been working on in Phu Yen and then move down and start working QL-21 in the sector just south of Dalat.

The thought was, let the 84th Engineer Battalion slide south from Qui Nhon to replace the 577th in Phu Yen; then we would finish up the work I've already described south of Tuy Hoa. Instead of us moving north to take the road north to Qui Nhon, the 84th would slide south and take that responsibility.

This would free us, then, to deploy down to the Dalat area, where we would move into that region, and then we would construct QL-21 going south and also 21 Alpha. QL-21A was a short cut-off that allowed you to cut from Duc Trong, where there was an airfield, over to Don Duong, where there was a reservoir, and avoid going up to Dalat. This was a travel saving in time and also avoided the grades and switchbacks to get up to the elevation of Dalat.

So, you could avoid going from Duc Trong to Dalat and then Dalat back to Don Duong. That was 21 Alpha. It was about 20 kilometers of highway through a river valley and very subject to flooding. In the rainy season, 21A was a big problem.

The idea was to keep 21A open during the year. Move the 577th there and we would have a mission to keep 21 Alpha open during the upcoming '69 wet season, and then get postured to start operations to upgrade the highway, 21 Alpha, and then 21 south from Duc Trong. Then go back down the highway toward Phan Rang, which was a bunch of switchbacks down the major mountainside to the coastal plain and to Phan Rang. That road from Don Duong to Phan Rang had been the responsibility of the 589th Engineer Battalion under the command of Lieutenant Colonel Al Costanzo, who had his headquarters at Phan Rang.

That was the general concept. So, I got into all of this, and I need to come back to those operations later. You asked if we had a schedule to get out of Phu Yen Province.

All of this thinking at brigade and in the groups was going on, and it really came to a head about the time Colonel Bill Barnes took over the 35th Group. He was the one that told me, "We are going to move the 577th south, and therefore you need to finish all of QL-1 and the Ban Thach bridge as soon as possible, and then begin moving your battalion down to the Dalat area." He asked me to put together a plan that would indicate when all of that would happen.

We used the critical path method throughout for all of our projects. We then had to come to grips with a schedule that was going to be hard and fast when we set it.

Now, I should say about this time we had been progressing pretty well through the cuts down at Vung Ro Bay. During the rainy season we would have a lot of erosion down hillsides and washing things out because we couldn't keep it stabilized. Once you broke the foliage when you cut it back, then you had a real problem. We brought in hydroseeders to try to seed the area, but it was steep and done with great difficulty.

During the rainy season in the rice paddies, road construction also was very difficult. We went through one hurricane in which QL-1 really looked like just a path through water. The only thing dry was that road. We really labored through some tough construction conditions.

We were also rebuilding four smaller bridges along QL-1. By that I mean two span bridges of about 35 feet of span. It made a pretty good bridge project, but smaller than the Ban Thach bridge.

We had really upgraded by now. We got the new 225-tons-per-hour rock crushers in, so we were really producing aggregate. We now had the dump truck company, so we were really hauling aggregate down to our Barber Green asphalt plant, to our concrete plant, and for the base course throughout the area.

Our plan for completing operations was to finish the area through the sand in the north. First of all, that was the easiest to do.

All three parts of this operation were quite different, as I mentioned. In the north, in the sand, we were using tractor-scrappers to maintain high production, to shape the subgrade and confine it. We would put on the base course, then come in and pave.

In the middle, through the rice paddy area, there was an existing laterite road that we had to widen. There, it was a matter of excavating out paddy bottom to the side of the road and then bring in lateritic kind of soil.

We had a mountain in the area that we had opened as a laterite borrow pit right next to the road. So, we didn't have to haul the sand way down that far, which would have been a real problem because the Ban Thach bridge divided the sand area from the paddy area. The complicator was that the heavily loaded tractor-scrappers would fail the existing road. We would then have to come back in and shovel out vertical chunks of existing road, bring it back up with rock, and stabilize it before we finished.

In the south, the cuts through the mountains were primarily dozer work.

So, we had tractor-scrappers in the sand. We had tractor-scrappers doing the haul in the lateritic center part, plus cranes and draglines mucking stuff out. Down in the hilly sections we had dozers working. Of course, we had graders working throughout.

We found a great opportunity to use Bangalore torpedoes while we were there to great advantage. When we were given the initial mission for clearance of the Vung Ro Bay jungle areas, we took Bangalores in there and set them off. They would strip through the jungle vines and cut them just like they would barbed wire. They left a very distinguishable area cleared. We also used chain saws, doing it by hand. You really couldn't get a dozer into most of the Vung Ro area because of the steepness of the hillside.

The problem was the hillsides around Vung Ro were shaped in concave fashion, and so the sound and shock waves focused toward the middle. Thus, using Bangalores we would rattle the shelves in the small post exchange and dump the merchandise into the aisle. So, that couldn't go on. Bangalores could only be used in a few places. Anyway, that experience sparked our interest in Bangalores.

Later on we were trying to clear and grub along the stretch of highway going through the paddies. There was a lot of rice and grasses. We found that by putting a Bangalore down beside the road along the shoulder—there was no ditch—and setting it off, we could blow grass and water and everything out. So, we would grub using the Bangalores so we could then bring in a dragline, clear out the soft paddy mud, and then bring laterite and rock in and dump it into what remained.

As we were progressing and trying to complete projects to inch on down to the Dalat area—I still have to come back to explain our plan to move out—we were given an additional mission. Even after we'd established a move date, we were given a mission to clear the highway from Tuy Hoa west to Cung Son, about 30 kilometers away. We were to use Rome plows to clear all foliage back 100 meters from the road.

This was a complicated operation. First of all, I had set the dates we were going to move, and this was a new mission. Second, we were told we would not get a Rome plow company or platoon. We'd be given about three Rome plow kits to put on our own dozers. This meant I had to take three dozers off production somewhere else.

Q: If I could get you to go through the Texas ball again. I believe we missed a little of that.

A: The Texas ball was a huge metal sphere used in land-clearing operations in Texas. I guess it must have been 8 to 10 feet in diameter, with chains that came out either end. You'd hook those chains with dozers, and the chains would cut the undergrowth while the ball rolled around. It wouldn't knock down large trees. It might knock out some smaller trees.

Now, the brush we were clearing along QL-7 really wasn't jungle. It was heavy brush and scrub kinds of trees with some bigger trees, but this wasn't thick jungle we were trying to clear away.

So, we embarked on that operation, and it was really difficult—difficult from the standpoint that, first of all, for the first several kilometers out from Tuy Hoa there was an irrigation canal lying right next to the roadway. The roadway was only about a lane and a half wide for one of our trucks, and there was the steep canal bank next to the road. We had to go over to the other side of the canal to get to the hillside to clear and cut away the foliage.

You really couldn't turn a low-bed on that roadway. To move back and forth across the canal was very difficult. It had to be almost a 90-degree turn. So, we built M4T6 trestle spans, and we would lift that in by Chinook helicopter, lower it into the canal, bring the trucks up, drop the balk in place on the trestles. The dozer would come down and make a 90-degree turn on the road, go across that completed bridge, then move up the hillside.

We had a company of armor—and I say armor because it was a tank company—but they were in armored personnel carriers with mounted .50-caliber machine guns from the 173d Airborne. They were our security out there; they went with our work party. The force stayed out in the field every night as they made their way west from Tuy Hoa.

So, then, when that bridge was no longer in position to be useful for resupply, we would bring a truck out, pull the balk off, and load the truck. We would run the truck down the road two kilometers, bring in another Chinook, leapfrog the trestle span down and put it in place in the new location. By keeping two of these bridges leapfrogged, we then kept ahead of our operation for resupply. So, that was rather an original way for keeping production going.



*U.S. Army helicopters leapfrogged M4T6 trestles along the route from Tuy Hoa to Cung Son in February 1969.*

Now, the hillsides were pretty steep, and so there were two ways we cleared them. First, we used Bangalore torpedoes, remembering how they had worked in Vung Ro Bay. Well, now we no longer had the concave problem, so we would use the tankers' armored personnel carriers to run the Bangalores from the road up the hill. Then we would fire the Bangalores and they would strip away the foliage—really do a great job.

The problem was that there weren't a lot of Bangalores being used in-country. So, during the briefings down in Saigon, when they presented the rate of use of various Class V stocks and other materials on charts, all of a sudden one week there was a spike on the use of Bangalore torpedoes. In the second week that spike continued too.

Meanwhile, we'd exhausted all the Bangalores in Qui Nhon and Tuy Hoa depots, and we were now flying them in from Danang. The loggers were very supportive. We put a demand on the system, and they'd load those Bangalores up in Danang, fly them down to Tuy Hoa, we'd offload them, and off they'd go.

I guess someone in the higher headquarters asked, “Why are we all of a sudden using all of those Bangalores?” They came down to understand they were all being used by one engineer battalion, the 577th. So, the whistle was blown, and our supply was cut off for not being used for what they were intended. They were certainly being used for high productivity in keeping the job going. We were both clearing and grubbing on rice paddy highways at the same time we were clearing along this road from Tuy Hoa to Cung Son. So, for about three weeks we had a field day, but then we were stopped.

Then we had to come up with something else on the roadway into Cung Son, and it was too steep, really, for dozers to operate safely. So, we came up with what we called the yo-yo technique. One dozer would stay at the top of the hill and put another on a winch that would work down from the top, scraping away, come back up, go down another path and scrape it away.

This area was too steep for the Texas ball or for normal kinds of clearing operations. Mostly there we used straight-blade dozing, not the Rome plow and stinger. In other areas where we had trees we used the Rome plow and stinger.

That operation continued for several weeks until we finished. That gets us back to the schedule for echeloning the battalion from the Tuy Hoa area to the vicinity of Dalat.

When we developed the concept of how we would move the battalion, we first had to come to grips with the schedule for completing the construction of QL-1, leaving it paved from Vung Ro to Tuy Hoa. Second, we were to finish the Ban Thach bridge. Third, we were trying to wrap up all of the other projects in Phu Hiep, but the ammo depot, which had been last priority, had been slipped and slipped and slipped. The berming for that and other projects could be turned over to the 84th Engineer Battalion.

We needed to be in the new area so we could work on QL-21A before the rainy season began. The concept was that we would switch flags of Delta Company's with the 589th Engineer Battalion. Delta Company had finished the northern part of the work on QL-1 and had moved down to the vicinity of Cam Ranh Bay, at Dong Ba Thin, to do some work there that the group wanted done.

So, I gave my Delta Company to the 589th out of Phan Rang. The 589th gave their Delta Company, already in place at Don Duong, up just below the reservoir, to me. So, we just switched guidons.

Of course we didn't need the float bridge company once the Ban Thach bridge was finished. The bridge company went back to group and brigade control down in the Dong Ba Thin area. We gave up the light equipment company and the dump truck company once we'd finished the paving. So, that meant really, then, we would echelon A, B, and C Companies and the headquarters and headquarters company on down to the new area.

The last to arrive was B Company. They were doing the last bit of work on QL-1. I put B and C Companies down at Duc Trong, at the other end of the triangle. We left one platoon up at

Dalat to do work up there at Camly Airfield. Then the Delta Company we'd taken over from the 589th, along with A Company and the headquarters, were at Don Duong. So, the 577th was going to be at three points of a triangle, Dalat, Don Duong, Duc Trong, with the headquarters at Don Duong.

So, we computed when we thought we would finish the Tuy Hoa jobs and set up the schedule to try to start moving folks down to the new area of operation. That really, then, was the time when we had a schedule that was fixed and one we wanted to meet. We always had a source of pride in the battalion that we met that schedule. We finished the Ban Thach bridge on the final schedule that we had developed.



*The completed Ban Thach bridge was dedicated on 7 December 1968.*



*Lieutenant Colonel Kem spoke at the dedication of the Ban Thach bridge.*

We completed the QL-1 paving and dedicated it one week late. Not bad, considering we had the Cung Son clearance mission put on top of us, and that was the job most impacted by that. We basically made the move on schedule.

So, we echeloned out. I started with a tactical command post down in the new area but stayed back mostly in the old area. Then more and more of our operations were down in the new area, and I would fly back and forth between the two, which were about 200 kilometers apart.

Another complicating thing was that we had been in place for a number of months. We really had a lot of supplies stacked up, and we wanted very much to take them down to Don Duong so we could use them. We had a large number of large steel stringers for bridges, and we had a lot of bridges to build. We already had been down there doing recons for the work. As soon as we took responsibility down there, we were on the road doing work, using the 589th's D Company, now under our operational control pending the flag change and reassignment.

So, we started bringing LSTs [landing ship, tank] into the beaches at Tuy Hoa. We would take our materiel down there, like the steel stringers, and we'd use dozers to winch them aboard the LSTs. Then run down the coast to Phan Rang, offload them, and haul them up the hill to our new base camp.

After a while the 18th Engineer Brigade got wind of all of that and put a stop to our materiel movement, and said we should leave all that there for the 84th. So, when we began to turn over to the 84th, we left a large Class II and IV stock of all kinds of things. We left a huge yard full of asphalt in drums we'd been using to pave QL-1.

This became a *cause célèbre* 16 months later when General [John W.] Morris went into Tuy Hoa and saw all the stocks lying around in the depot. He was the 18th Engineer Brigade commander by this time. There had been a mission change. They decided not to bring the 84th down to Tuy Hoa and the 84th didn't come in as they originally planned, but we had arranged materiel transfer, S-4 to S-4, when we left.

Now, they hadn't physically completed the move, but we were gone and were unaware of that. So, there were no engineers in Tuy Hoa when General Morris went up there and found all those asphalt drums sitting out there in this huge yard and all of the other equipment. He decided that the 577th and I had abandoned all this stuff and left it there, which wasn't true. We'd turned it over to the 84th.

He also found a rock crusher down at Vung Ro Bay that he said we'd abandoned and left there. That also wasn't true because we had turned it in to a log command property disposal company. This rock crusher was about 200 meters from the DeLong pier where we brought in all the ships. The idea was leave it there. They inspected it. They took it off our books. Then they were going to make the arrangements to put it on whatever ship was going to take it away.

The trouble was, they deactivated that property disposal outfit about six months later, after we already left the area and before they shipped out the crusher. When General Morris came up, he saw this rock crusher there, saw the 577th's numbers on it, and said, "Find out who left this here." He then ordered the 577th, by then commanded by Lieutenant Colonel Ernie Edgar, to send a detail north to clean up the mess they supposedly left in Phu Yen Province.



*Lieutenant Colonel Kem (left) with Brigadier General John W. Morris, Commander of the 18th Engineer Brigade, at Don Duong, South Vietnam, in May 1969.*

Q: So, you and General Edgar did interact quite a number of times.

A: Ernie Edgar and I have interacted a lot. General Morris and I have interacted a lot. Now, that's the other side of the story, as Paul Harvey would put it. [Laughter]

Q: Let me ask you a couple of things before we move south. What about the equipment that you had there? Obviously, with the attachments, you had a lot of equipment. Was it pretty much appropriate to the job? Did you have any trouble maintaining it, keeping it going, spare parts, problems along those lines?

A: Yes. I have to talk about it from several different aspects. First of all, when I arrived, our quarry operation really wasn't doing well at all. We had a few wheel-mounted drills, and we could not drill fast enough to provide the blast rock in quantities to feed the crushers. We badly needed crawler drills that we could move around on the slopes and really keep up drilling production.

We were borrowing drills from the Air Force and then having to give them rock. It was fairly torturous, but finally, through some support from my group and brigade headquarters, we got the right kinds of drills so we could really up the production of rock. That helped immeasurably.

The 75-tons-per-hour crushers were often down. They were old, and they didn't produce enough. Once we got the drilling up to feed them, they weren't producing enough to do the job that needed to be done down the road.

This need had been well known by theater engineers already, and so they were already procuring the 225-tons-per-hour crushers. I was fortunate enough to be there when they came in. That greatly increased capability and production. That was a godsend from the standpoint of getting the job done.

The Barber Green asphalt plant was yet another story. When I arrived, it had a history of always breaking down. So, I took it on myself to try to flag attention to get it fixed. We had about 4 percent of the replacement parts on hand. After fighting that problem for eight months, we left and left the Barber Green plant there when we went down to Don Duong. When we left, we still only had about 4 percent of the replacement parts on hand. So, the parts system never changed and never accommodated the needs for getting the Barber Green taken care of.

The huge main drive shaft, in fact, was about four to five inches in diameter and about 30 inches long. It would break after about 26 hours of operation.

So, the way that we fixed that problem was to go over to the Air Force and give them C-rations. They then would let our machinists work with their bar stock through the night shift. They worked the day shift; they didn't want to work the night shift. They'd let our guy work the night shift, and he'd turn out another shaft. He could turn one out in about 12 hours.

So, we basically just kept even. You figure 24 hours of operation, having to work only night shifts to rebuild. So, we had a guy who was continually building a new shaft so when it failed somebody else could install it, and he was making another. We tried to stay one shaft ahead.

We spent the whole eight months that way on the Barber Green plant. We brought in tech reps to look and advise. We brought in mechanics to work the problem, but it was never solved. We just kept trading off C-rations for time on the Air Force's machinery.

The other engineer equipment we had was all right. We could keep it operating. I'm talking now the basic tractors, scrapers, dozers, graders, cranes, the rest of that. People worked hard on maintenance, but we had to change our mode of operations. The old operator morning maintenance followed by during-operations maintenance followed by end-of-operations maintenance, with quarterlies and manuals and hourly periodic maintenance by mechanics as they became due, didn't work.

It didn't work because we only had a limited number of hours to work when we were in a hostile area. Base camp at night, full days on the job. We didn't work in the dark in those hostile areas strung out and vulnerable along the road. When we worked that way, it meant we had to take advantage of all of the daylight hours to operate. When you put an operator out there and bang him around all day, he's not going to be too fit to do the after-operation maintenance in the evening. He needs to be fit to start off the next day. We were cheating on

time or you're cheating on strength, energy, and capability of our operators. So, we changed to operate more like a construction firm, where we would bring our tractor-scrapers, for example, in at night after being run all day. Then nighttime maintenance teams would service them all. When that operator had a good night's sleep and came out the next morning, he could hop on his mechanic-maintained tractor-scraper, head out, and operate.

So, we modified by getting teams of mechanics who pored over the equipment every night. We maintained on the night shift, and we operated during the day shift. That was our accommodation for that kind of equipment and that kind of operation.

I guess that addresses most of the types of special actions we took.

Q: Did you find the training of the engineer soldiers pretty good, your operators and others? Did you have a lot of turnover—well, you did, I guess, while you were there.

A: We had a lot of turnover. I thought we had skilled noncommissioned officers who really knew what they were doing. The maintenance ones were very good. The people in the asphalt platoon were very good, really knew their stuff.

The people that came with the concrete detachment didn't know anything. The Army just formed the detachments, assigned lieutenants and folks to it, and sent it. Those detachments don't exist in the peacetime Army. We also used tech reps, civilians hired by USARV [U.S. Army, Vietnam] engineers to come out and help train folks. We had a tech rep who assisted us well on the concrete batch plant and the precast panel operations. He spent six weeks with us getting that operation going. We had tech reps for other things as well here and there, who would help out.

I thought our soldiers with basic training and advanced skill training, such as the equipment operators, knew the rudiments and got a lot better once they'd been operating for a little time. Except for dozing up in the pass near Vung Ro Bay, most of the terrain was flat, so they got to operating pretty well.

Q: What about discipline and morale in the '68, '69 period. Any particular problems?

A: Well, it was before the big problems, but we had some incidents. We had a terrible incident about three weeks after I arrived. In the asphalt platoon, one of our people who was on drugs was out on the perimeter one night, and his noncommissioned officers and his officers had been giving him some grief over time. We were sitting there that night watching movies in the officers rec area when we heard a burst of M-16 fire within our compound. This one soldier had just gone over the top; he had come back into the compound and was after his company leadership.

It was really tragic. He killed his platoon sergeant, the one person in the battalion who really knew asphalt and the one that we really were counting on. He maimed his company commander, the A Company commander, who eventually lost his hand from the gunfire and was never back to duty with us. He was medevacked right from there. The platoon leader escaped by ducking down between some sandbags and got away. Basically, this soldier holed

up then for the next hour in the barracks until he was talked out by a couple of his friends and surrendered.

That was rather shocking to everyone. It was probably our first knowledge that there were drugs around and they were to be a problem. Drugs were not a major thing, like they came to be a couple of years later. There were very few drug incidents.

We got some captains in, as I mentioned, and put them into company command positions in places where discipline was a little ragged. For instance, we put Captain Sam Champi in as company commander of C Company. He had been an all-East lineman for Army—West Point. He was a huge guy; I mean, he was just intimidating to look at.

Captains Kurt Rhymers, Dave Pierce, and Bob Lowry came in, also class of '66, and some others, and so we got stronger leadership. Once the summer changeover finished up, when we got those other people in, I put the more senior ones in the company commands. We had a battalion executive officer and S-3, both majors. Dick Copeland came in to be the S-3. Pat Cummings moved up to be the executive officer.

We got a new command sergeant major but he didn't work out and, after three or four months, I took the B Company first sergeant, First Sergeant Benini, and made him the command sergeant major, and he was superb. So, we applied a lot of leadership by assignment and by the sergeant major's and my getting around often to the various units in the battalion.

When we moved down to the Don Duong area, we moved into the three locations that I mentioned. Previously in Phu Yen we had been splintered, with some people living at Vung Ro Bay, some people living halfway down Route 1, some people living at the airfield at Tuy Hoa, and most of us working south.

So, we worked at it, but didn't have major problems, other than that one bad incident.

Q: That's an important function of a battalion commander, isn't it, to take his personnel, his officers, and assign them where they're needed to correct problems.

A: Absolutely. You've got to really know your people, and pick people to go to the right place, and change them when necessary. I relieved the concrete detachment commander while he was there because he just wasn't functioning; he just didn't have what it takes.

We had to work at it. It was such a big battalion, 1,400-some folks with all of the extra companies. When the second engineer light equipment company came in, they were from the Vermont National Guard. We kept them for a couple of months while they worked, trained, and acclimatized in-country. Then they moved off to Ban Me Thuot to join the 70th Engineer Battalion for the upcoming work there just as we were moving on down to the south to work on QL-21A.

That assignment of the Vermont National Guard brought its own particular problems. There were people who'd left civilian jobs who weren't sure they knew why they were in Vietnam

or why they ended up in Tuy Hoa. One platoon leader's driver was his boss back in civilian life. So, we just had a few interesting little things to work out.

Q: That's an interesting challenge, I think, to bring a National Guard unit in. It was, to some degree, done in World War II. That's interesting.

What about racial tension and racial problems? Were there any particular signs of those this early?

A: Not really. In the 577th we didn't have much problem with that. I wasn't cognizant of any problem, and I was alert for any.

Q: The other area that you mentioned earlier, one of the missions you had was combat support. What sorts of activities were you involved in; how much did that involve?

A: We didn't have too much of that, but it always took the priority. We dropped the other things when it came up.

The 173d was engaged up at Landing Zone English, north of Qui Nhon, so they spent little time down in our area. Every now and then they'd come down for a while. As I mentioned, they sent the one company down for us to secure the land clearing for special forces out of Cung Son. We were out mutually supporting them in that operation.

We did some mine clearing for various folks. The Koreans pretty much spent time to themselves and used their own engineers. We did, as I said, some mine clearing and sent teams out often with various people depending on the mission.

A typical operation came about when we were given the mission to open the road to Cung Son for a major supply convoy that was going through to the special forces detachment there. This was a big convoy, and they felt it would be interdicted, and they didn't want it to be ambushed on the road.

Our mission was to clear the road in the morning and put the convoy on the road by early afternoon so they could close at Cung Son by nightfall. The operation started slowly and was really dragging. Our 577th team was very conservative as they moved out on their first mine-clearing mission.

By eleven o'clock we'd gone only about 3 kilometers of 30. I was back in my command post monitoring that operation by radio. Finally I directed that the engineer team take five-ton dump trucks, loaded with earth in the back and sandbagged, and back them down the road.

They did that, and I flew out to visit them on the highway. We hit two mines with those five-ton dump trucks—destroyed the trucks, but didn't hurt the operators. I think one of them had a slight scratch, an elbow or something. We opened the road and did it quickly and pushed the convoy through by that evening.

Q: Was that a technique you'd heard about before, or you'd devised on your own?

A: I don't remember. I don't remember hearing about it. We typically had the bottoms of our trucks sandbagged, so that was ready. We went out with trucks in the column filled with earth in case they had to patch anyplace, but I don't know what prompted me to think of that.

So, I still get a mental picture of a truck with a wheel flying up in the air.

We did not have a horrendous lot of combat operations down in that area, but we had enough. We had a mounted reconnaissance patrol coming back from the road-clearing operation ambushed—killed the driver but the others got away.

We were mortared several times. Our team down in Vung Ro Bay was mortared one night, killing the squad leader and at least one other, and several were wounded even though we were bunkered in sandbagged culverts.

We had an incident one day where the Vietcong came down the hillside above the laterite pit where our tractor-scrappers picked up the material to be taken to the highway. They fired an RPG [Rocket-Propelled Grenade] into the cab of one of the tractors. The operator, taken under fire, spotted another tractor-scraper coming around the outside of his that had stopped. The driver jumped into the one coming around the side just as an RPG came into the cab. His own tractor burned in place.

Down in the Don Duong, Duc Trong area, we had several instances on the highway. One night vehicles moving from Don Duong to Duc Trong, even as the USARV inspector general came into our area, were stopped at a toll station. We were out later that night than usual; it was getting towards dusk. The Vietcong had already set up their toll station along the highway when the convoy came along. A short firefight ensued.

Another incident that happened was almost amusing, considering the circumstances. We did have IG inspections over there; even though we were fighting the war, we had to be ready for inspections.

B Company, our last to move, knowing they were going to go through this IG inspection a week and a half after they arrived, had meticulously fixed up their prescribed load list in an express container. They had all the right bins and markings and everything else, had loaded the container on a tractor-trailer and moved it down to their new location, offloaded it, and were ready to go for inspection.

They were located with C Company at Duc Trong, and our engineer compound was on the back side of the compound of the headquarters of the province chief. Well, the Vietcong had decided to attack the province chief's headquarters. They came around to our engineer side with their secondary attack. It was a feint, really, just to hold our people in place while they assaulted the ARVN facilities on the other side. The Vietcong put an RPG right into that B Company's express container and spewed all over the place the load that had so meticulously been taken care of and hauled all that way from Tuy Hoa.

Q: Now, this is not long after the Tet offensive, so, I'm sure people were still alert, on edge, or whatever from that sort of thing. In some areas, I guess, in the aftermath of Tet there was

actually a sort of slackening of the pace of enemy operations. They suffered so heavily during that period. Could you see the impact of Tet, or the aftermath, while you were there?

A: No, not really where we were. I think the thing you're referring to is in areas like Hue, Phan Rang, Saigon, the others where there were big engagements. Up in our area we were never mainstream with large, hard-core units.

Tet happened before I got there. Phu Hiep came under fire attack during Tet, and the 577th and others on the perimeter had fought them off. The Vietcong had occupied a school just outside the perimeter, and we had basically destroyed the school with fire. While I was there, we came back in and rebuilt that school for the Vietnamese.

The Vietcong didn't take a huge toll in the Phu Yen, Tuy Hoa area. Nor did the counterattacks take a big toll of the Vietcong, so they really weren't destroyed in the province. They were around and they kept things going, like those incidents I talked about. There were not large numbers of Vietcong or incidents.

The Korean regiment was very aggressive. They were always taking operations to the periphery areas around Tuy Hoa and really kept the Vietcong on the move. The Vietcong incidents we'd have would be planned skirmishes, planned firefights, basically by very small units.

Q: Did you have much contact with Korean engineers?

A: No, very little. I visited the Korean regiment early on to try to make contact with the commander. He really wanted to be autonomous, and he didn't want anybody messing with his engineers. We would invite them over in the evenings, and we would have some contact, but not a really professional kind of contact.

Q: Well, maybe we can turn to the activities in the Dalat area, if there isn't any more about the early period that you'd like to cover.

A: Well, I talked to you a lot about Dalat already. We continued our echelonment and moved into the new area. Either the USARV engineers or the brigade had come up with a study that said, for all of Vietnam, that building revetments and base camps out of sand bags was not smart nor cost effective because they wore out and a lot of effort was spent rebuilding them. There was a design to use plywood for revetments. You could build one very quickly, put on plywood, brace it, and put the sand in between, as opposed to stacking individual sandbags.

When we went into Don Duong, we decided to move in with Delta Company of the 589th, now our Delta Company. We built the base camp at the base of a large dam. The dam had been built there for hydroelectric purposes. There were large penstocks that ran down the hillside toward Phan Rang. The penstocks had been destroyed.

We built our compound right at the base of the dam. It was a nice flat area, away from the village, where we could immediately start down the switchbacks towards Phan Rang or run

down 21 Alpha. This was the intersection or the meeting point of the roads from Dalat and from Duc Trong, QL-21 Alpha.

Now, that was controversial later when General Morris arrived. He challenged why would we build our base camp right below the dam, from the standpoint of concern that the Vietcong could blow the dam with a large loss of life. One of the things I had to do early on was show him why we weren't in great jeopardy. I did this by demonstrating the amount of work that would have to happen for them to be able to provide a demolition charge large enough to have a catastrophic failure or breach of the dams so the water would pour on us below in the base camp.

We had our artillery at both ends of the dam, and it was secured. The kind of effort that would be required to breach the dam would take such a number of hours, or such noise, that it would be very obvious, and counteraction would be taken.

Further, no matter what happened with the breach where we were, we were so close that the entire river valley below us, along 21 Alpha, would be inundated. Because it was very populated with Vietnamese sympathetic to the Vietcong, any kind of warning for them to get out of the way would be certainly noticeable to us as we were going about our operations.

With that, General Morris acceded to the point that we were okay.

Q: So, one of your missions down there was to keep the road open during the rainy season, I think?

A: To get ready for the upcoming rainy season.

Q: To get ready for it.

A: When I departed, we were just getting into the first weeks of the rainy season. The mission was to keep 21 Alpha open. We were then to prepare to widen QL-21 south of Duc Trong.

We were also to look for a quarry site for rock to support further construction and paving operations. Finally, we were to take charge of the rest of the area and to build the switchback roadway down the mountain. That was a real challenge because it had severe high grades and switchbacks up a rather precipitous hillside.

We had three incidents during that time. One of them was natural. There was a tremendous rainstorm just before I left that breached a roadway where we had just put in three culverts. I mean, that's how quickly, in this narrow valley, the water came up. So, there was reason for us to be there to keep that road open.

Second, the Vietcong blew out part of the roadway leading up the mountain through the switchbacks. They did it very skillfully at a bend, so skillfully that the small Vietnamese buses that were typical of the area, loaded with folks, could get around the crater. Yet, our 1st Log Command stake and platform trucks couldn't get around it.

So, the Vietcong had kept the populace in mind, but had done something to thwart the Americans. It was a real challenge to get the road back in, and we solved it by building what we called the “band-aid.” We drilled straight down in the rock, put steel rails in vertically, then used vertical anchors to tie cable to horizontal steel rails that would hold a wood frame onto the mountainside. We then filled behind the frame to grade with rock and resurfaced the road. We bound that “band-aid” to the side of the hill, which dropped off 100 feet or so—patched it. That took about two days.

The last incident of the three was on the day before my change of command. The Vietcong blew a bridge down Route 21, just at the boundary of our area of operations where we met up with 116th Engineer Battalion to our south. Route 21 was the main supply route and we needed to open it quickly.

We had a panel bridge at our location in Don Duong, which was across the outlet from the dam and spillway. That bridge facilitated movement right after coming up the hill from Phan Rang and led straight into our base camp, rather than going around through the village.

I’d already asked that our people pull the bridge and then put it up again, just for some training, and that was ongoing. We sent a recon party down to quickly recon the blown bridge site, and we needed more Bailey bridge.

We started one company immediately to pulling out that Bailey bridge. There was another Bailey bridge down in Phan Thiet, and that bridge was moved overland, under command of some other engineer battalion, to the bridge site. Then we moved our Bailey bridge south on 21 Alpha, then 21 down to the bridge site, and the overall operation was my responsibility and under my control.

Through the next afternoon and evening we put the bridge in. One morning we found out it had been blown. That day the recon was made, and then we put things into motion to pull out our bridge and bring up the other bridge, so they were moved the second day to the bridge site to be put in that afternoon and evening. It was finished in the early morning of my last day—change of command and departure.

Colonel Barnes, the 35th Engineer Group commander, and Lieutenant Colonel Jim McKnight, the incoming battalion commander who had just come in that morning, arrived. Jim McKnight’s postponed arrival prohibited any overlap with me. Our overlap was a couple of hours after Colonel Barnes arrived. I jumped into the helicopter, and we flew down and looked at the bridge site. We returned to Don Duong, talked for a few minutes, and then we went out for the change of command ceremony. General Morris presided.

We flew down and saw that the bridge was in and the operation was complete. I could now leave. We’d had a few wounded down there by mortar fire and some mines left in the area.

Q: Maybe this is a good place to ask you to compare and contrast what it had been like, what you’d seen, what it had been like in Vietnam in your first tour, ’62–’63, and what it was like

now in '68-'69. How did the war look different? How did you view things that were going on there.

There are obvious differences, and I suppose, in my view, obvious similarities, but it's interesting to be there in the two time periods, earlier and then sort of mid-war, five years apart.

A: To go back to the same area.

Q: Yes, back to the same area. Right.

A: Well, there was quite a difference. During the first one, of course, I was an adviser in an era when there weren't many Americans and no operational troops, other than aviation. Everything then was oriented toward the Vietnamese doing it, and our energies were spent trying to make that happen.

When I came back, I was in the American chain. We still had advisers who were out doing the same, but now we in U.S. troop units were all very much oriented to our own particular missions and how they supported the whole. So, I was caught up in the operational activities associated with U.S. units.

We were everywhere; every place you went there were helicopters flying, operations going. We were reading about them in *Stars and Stripes*, and participating in them, and the activity level was high.

It was very much, from my viewpoint, a U.S. operation by that time. We dealt with the province chief and with the province advisers, but the whole context was different from when I operated there before. If I'd gone back to be another adviser, I'm sure that context would have been a lot closer to my earlier one.

Going back into Tuy Hoa and trying to reconstruct where we were when I left and where we were when I came back, I guess I would say we were about at the same place. We certainly hadn't "pacified" or made any other inroads to extend our areas of control. I guess I was amazed when I put together all that happened in the interim. When Diem had been assassinated, all the province chiefs had gone out, including the one in Phu Yen Province. Whereas, as I told you before, when we moved into Tuy Hoa, the lights came back on because the Vietcong moved out, well, after Diem's overthrow the Vietcong moved back into Tuy Hoa.

So, once again, then, when the Americans came back—the 4th Infantry Division had come in there, and then the 173d Airborne Brigade had operated in there aggressively—the Vietcong had been pushed back to the jungle and mountainous fringes once again.

So, there were indications that progress had been lost and things had not been put in place to stay. Control appeared to be about like it was—no better, no worse. The Vietcong still went to a lot of places at night and then wouldn't show themselves during the day. We still operated out and around, went after them in the fringes now, which we could do much more

aggressively because we had more units: the Koreans, the Vietnamese, and the 173d, as opposed to only the 47th ARVN Regiment when I was there earlier.

Q: Was battalion command what you expected it would be like?

A: Yes, very much so. I was ready for it and enjoyed it. I really enjoyed it because we had great missions, doing super work, and I had area responsibility. I mean, my responsibility was for anything and all that came into that area that needed engineer support. It was up to me, and it was my decision. I could always be second guessed, but it was my decision as to what went and what didn't go. When somebody needed engineer support, then that got the priority and we would slow down something else.

What got slowed down was my decision. I knew they wanted me out of QL-1 construction, which also meant the Ban Thach bridge. That was construction, and that could take second seat to combat engineer operations.

So, all of those responsibilities were mine. For about six weeks straight during that period I never talked to my group commander.

I was promoted to lieutenant colonel on the 12th of August. I'd been there now in command since the 6th of July. Colonel Fowler called me on the telephone at the end of the day and said, "Well, I suppose you thought I was going to fly in and pin them on you." I said, "Yes, Sir, I really thought so." He said, "No, just pin them on. I'm not coming." [Laughter]

Q: That's interesting. So, the group commander left the initiative, the leeway, to you?

A: Del Fowler's modus operandi was just that. He used to tell people that his group did so well because he "turned on" his battalion commanders and didn't mess with them unless they wanted to be helped.

Bill Barnes was not that way. He stayed in much closer contact. By the same token, though, he didn't take away my responsibility or accountability and I made the decisions. He might tell me that I hadn't paved enough, that the 864th Engineer Battalion under Lieutenant Colonel Art Daolis had paved a kilometer that day, and "Why didn't you pave like the 864th could?"

I got together with Art Daolis at a commanders conference three weeks later, and over a beer in Bill Barnes' little club at the 35th Group headquarters he said, "Boy, you 577th guys are really good. We just can't keep up with you. Barnes calls me every day and tells me how much the 577th has paved." So, after that, we knew. [Laughter]

Q: A technique, that.

A: A technique. I enjoyed both of my group commanders, and I really enjoyed John Elder, the brigade commander. I enjoyed being there in command at that time because I had an awful lot of autonomy. You knew you were responsible.

You know, it's sort of what General Max Thurman later called Rule 14. "When in charge, take charge." In Vietnam then you knew you were in charge. There wasn't any question about it. We would design something and then the 18th Brigade would say, "Well, who's approved your design?" "Well, no one. You want to approve it? Come on up and approve it. Don't tarry."

So, it was a bunch of can-do, move-out kind of folks, and we all had good missions. There were construction projects, which were finite. I know my company commander that had responsibility for that ammo supply point day in and day out got his equipment taken away from him. I mean, I had to console him every now and then by saying, "Now, look, you recognize that's just one of your many projects. That's not the battalion priority, so it's always going to be delayed."

I made the decisions as to how we used the resources to do the missions we were given. I made the decision to change our way of doing maintenance. I didn't have to ask for permission for those things.

We learned to operate so that we could make things happen. We would get the LSTs to take our supplies down to our new location. We knew the responsibility for security was ours, and for patrolling, and all those kinds of things, so we just took charge. A very satisfying period.

Q: Any other thoughts you have on the Vietnam period, '68 and '69?

A: Yes, I should say one more thing. It just occurred to me. You asked how the equipment was, and it occurred to me I didn't comment on getting supplies. The supply system where we were was very tenuous. You could order something for a particular project, like certain stringers and certain lumber, or your equipment replacements, and when they came into the depot they probably would get diverted.

So, early on it was apparent that we needed our guy at the depot. So, I put a specialist 5 at both the depot at Cam Ranh Bay and the one at Qui Nhon. His job was to go find our stuff, or available stuff. If it was available and we needed it, he would make out the requisitions for it and put it in "lot 16, bed 8," and we would go get the item. Then we would scramble the vehicles or the aircraft to bring it from wherever it was.

So, to make the system work, we really had to have our own expediter, maybe even protector.

Q: That's interesting. I've heard of a similar technique used during the World War II period too.

A: I'm sure.

Q: Perennial problem. [Laughter]

A: Right.

Q: This might not be a fair question, but let me throw it out to you. Shortly before this you were in the 307th Engineer Battalion, 82d Airborne. How would you compare the two battalions,

the 577th and the 307th, in terms of readiness, training? They were different situations, of course.

A: Well, they were absolutely different. In the 307th Engineer Battalion (Airborne), I joined a battalion that always had a high priority. The 82d Airborne Division always has had a high priority. The 307th had a very high caliber group of officers.

A lot of noncommissioned officers had been in and out of that battalion for years, so they really knew what they were doing. The officers were very high caliber, and senior. You didn't have lieutenant company commanders. In the 307th, we had captains. So, it was just a higher caliber of folks to begin with.

Second, the 82d works very hard on motivation and the "can-do" thing. We'd just been in the Dominican Republic and everybody felt good about that operation. We knew how to make things happen.

By the same token, the jobs we had to do, the training—I mean, there were high standards for training. You had to do it right. We didn't have to produce things and build things on the order of what we had to do in Vietnam.

The 577th Engineer Battalion (Construction) was altogether different. It was a battalion with very lean leadership from the standpoint of experience. We had company commanders who had less than a year of commissioned service. Even when we replaced them, the replacements would have less than three years of commissioned service. I would say some of our commanders in the 307th were in their fourth, fifth, and sixth years of commissioned service.

So, you had people in the 577th who were very junior. They never had an opportunity to really find themselves as platoon leaders and company execs before they were thrust into company command. They had great heart, all well motivated, but they just didn't have experience and maturity. We didn't have that cohesive drive on motivation that we had in the 82d. We did have the kind of motivation that professionals possess when they want to do a good job.

We had good noncommissioned officers for construction, and, as I mentioned before, I think they really knew their job of vertical construction and horizontal construction and that sort of thing.

Both battalions had maintenance soldiers and leaders who really knew their jobs, but certainly the job in the 577th was a lot more difficult than the 307th with its small amount of equipment and the small hand-operated stuff in the 82d. The 82d's standards of having to meet a roadside vehicle spot check were a lot higher than when we were operational in Vietnam.

So, there was a big difference, and I think the people that I served with in the 307th, 82d, could have fallen into the 577th and done a superb job. My commander in the 307th was Lieutenant Colonel Jack Waggener. He'd come over and was now commanding the 45th

Engineer Group in the north, while I was in the 577th in the 35th Group. Al Rowe, S-3 in the 307th, was at this time also in Vietnam. Chuck Henry, who'd been maintenance officer in the 307th, was up with Jack Waggener in the 45th Group.

I would say that by the time I got the 577th we had expanded the Army considerably. I arrived in the 307th about the time of the first deployments to Vietnam. By the time I got there post-Tet, the big deployments were over and we were at about max size. We had thinned out the professional leadership of the Army and spread it into all the units, so it had to be thinner in any one place. Then there was the turnover, the 6-month, 12-month turnover.

Q: Interesting. That rotation is coming up again as a subject in Saudi Arabia. What did you think of the one-year rotation? Was it too short? Did it serve a valuable purpose?

A: Well, I think so. I mean, in the heat and stress of what went on in Vietnam, one year was about as much as a lot of people could take. If somebody wanted more of it, they could get more of it by extending. A lot of soldiers from World War II slogged through the whole war, and a lot of them were also only in units with that kind of intensity for short periods of time.

I was the benefactor of a change in command tour over there. When I went over, it was a six-month command tour. Certainly I thought that was too short. I guess about my third or fourth month there, they were thinking about leaving at least some folks in for a full year tour as commander. I think I was among the first to get that opportunity. I had been told I'd probably move down to be the executive officer of the 35th Engineer Group, and I'd be replaced in six months.

I didn't really want to do that, so I asked Colonel Jack Waggener, as I just mentioned, the commander of the 45th Group, if he had any battalions available and that I was available. He'd mentioned that to Major General Dave Parker, the USARV engineer, who was at this time considering leaving commanders in place for a full year.

So, he asked Jack Waggener, "Where is Kem going?" Jack told him. Then General Parker said, "No, we'll leave him right where he is." So, I got to stay a full year in command.

Certainly six months weren't enough. I would say a year in command over there was a pretty long time to continue under that kind of load and stress. I think I was—I hate to use the word—burnt out; I certainly could have probably used some fresh ideas by the time I finished my one year.

So, your question really had to do with one-year tours overall, but I gave you an answer that indicates that the six-month command tour, in my mind, was a more important parameter and too short.

Q: Okay. Should we turn away from Vietnam? Any other thoughts?

A: Let me see. I guess not. I guess we can come back to them if necessary.